Nomadic Technologies, Inc
SuperScout EMF/Estop Cable Installation,
SuperScout Direct PC Power Cable Installation,
&
SuperScout Vent Fans Installation

This document for use with a SuperScout (Scout with internal PC).

This document shows how to field install parts in upgrade kit 2002-0201-0501
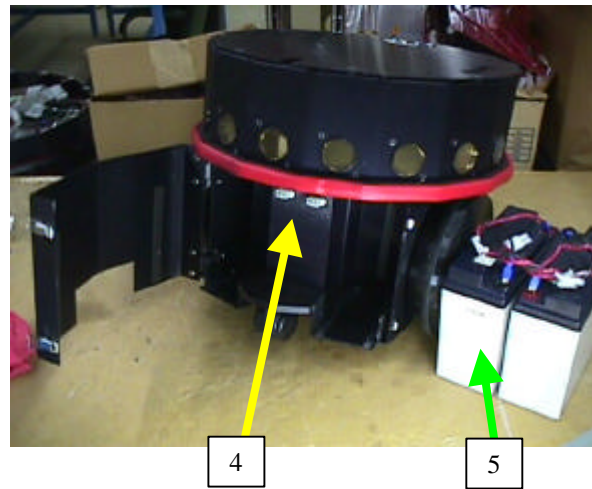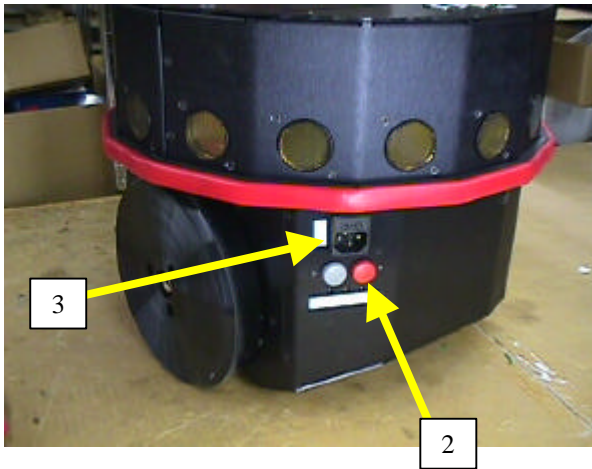
<u>FEATURES:</u>

Part 2001-0601-1701 :
- Fixes a possible problem of motor amplifier H-Bridge failure when the robot is run at very high speeds (> 400 [0.1*inch/s] wheel speed).
- Adds an Emergency Stop switch which disconnects power to the motors. This allows a user to disable the motion of the Scout.
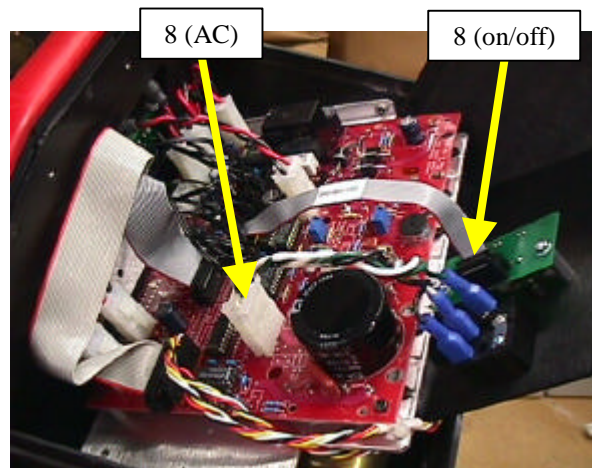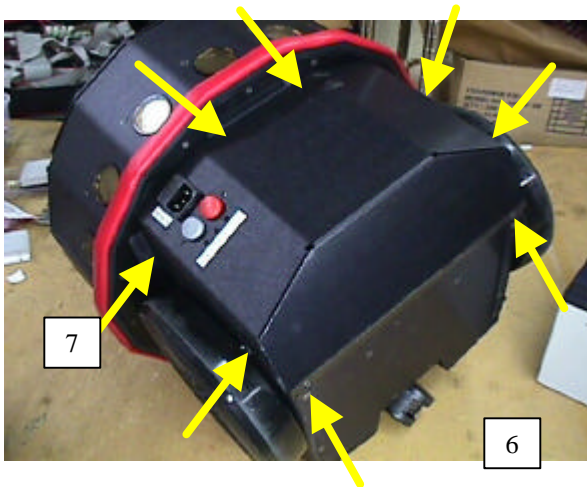
Part 2002-0601-0801:
- Provides direct 5V power to the Super Scout PC and improves the quality of the power to the PC and its peripherals, including the notebook hard drive.
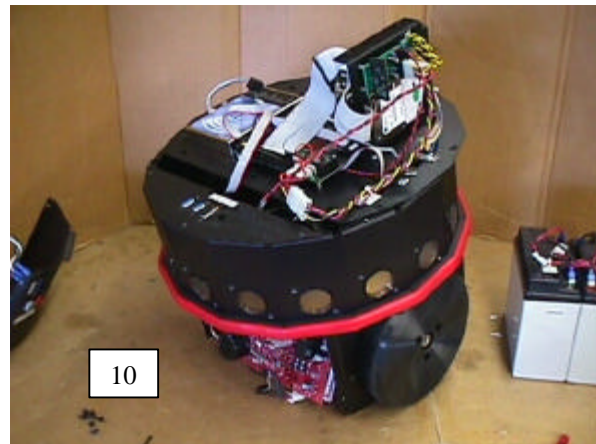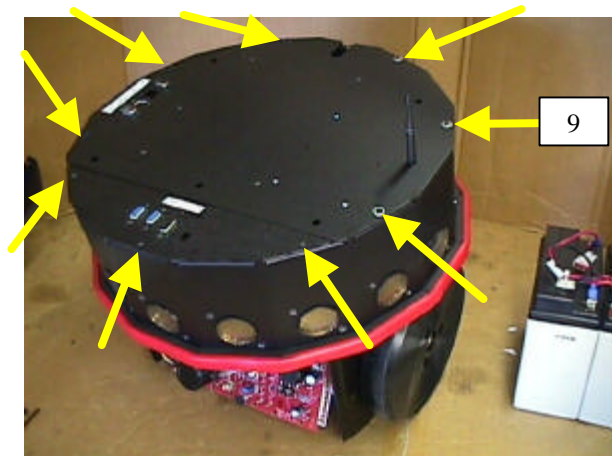
Part 2002-0501-0301:
- Provides ventilation fans for the CPU compartment of the Scout to reduce the internal temperature.
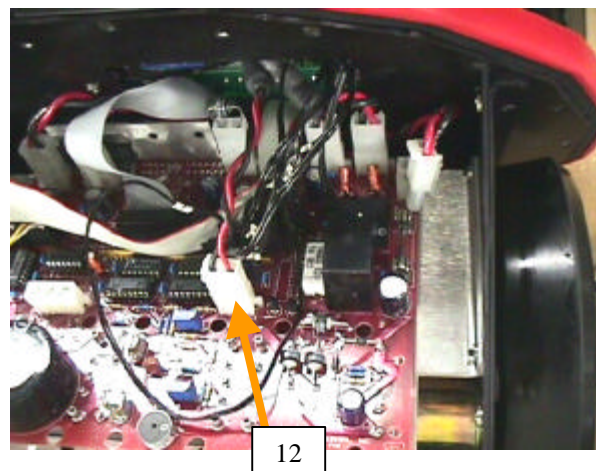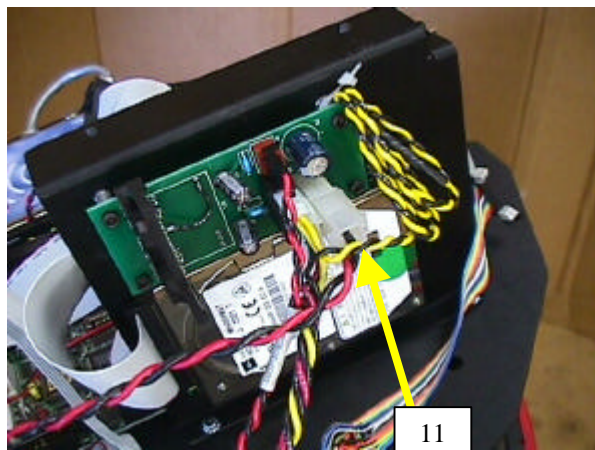
1. !!! Shutdown Linux CPU if necessary !!!

2. !!! Turn off scout by hitting "off" button on front of scout !!!

3. !!! Disconnect ac power from the scout !!!

4. !!! Unplug both batteries !!!

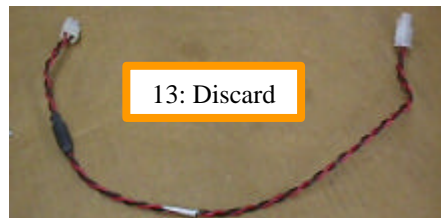5. Remove batteries from scout

6. Close battery door. Place scout on back.

7. Use 2.5mm hex wrench to remove 8 screws (M4 CSK) in front of Scout

8. Carefully lift front of Scout and disconnect 3 wire AC cable and 10 wire ON/OFF cable where shown
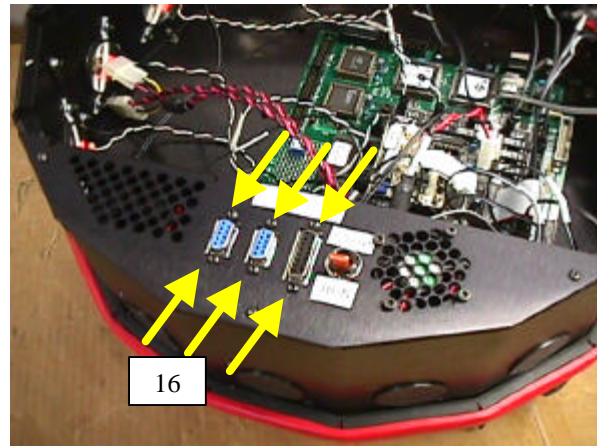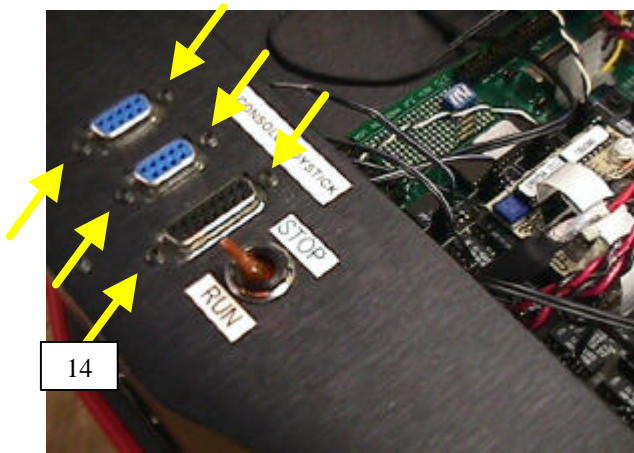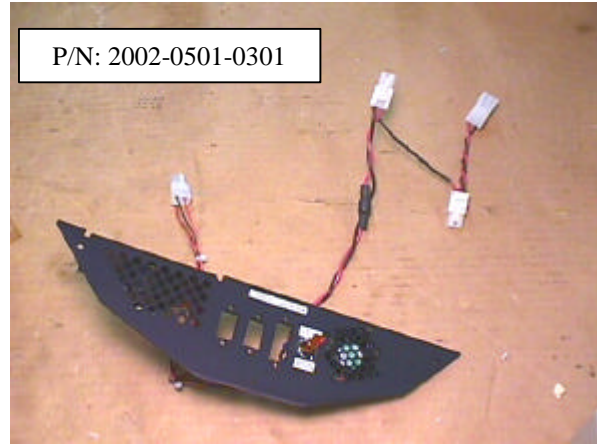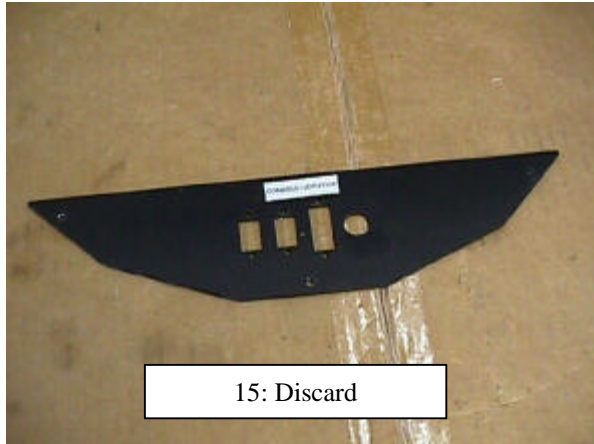
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9. Using a 2mm hex wrench, remove the 9 screws (M3 Button) and 6 washers holding the top plates.

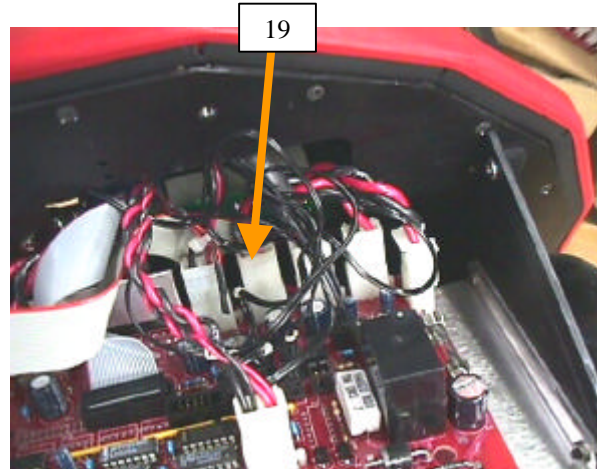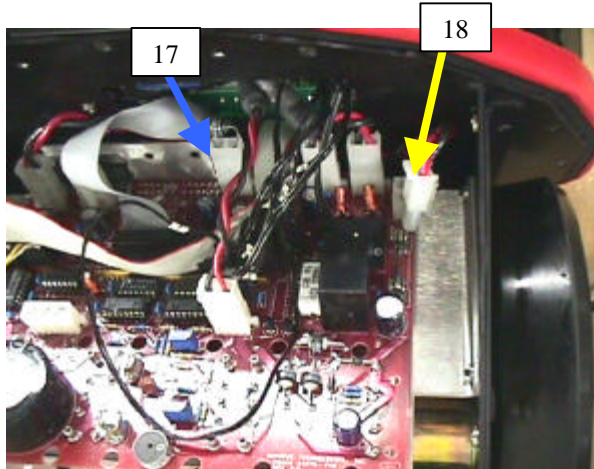10. Slowly rotate the top plate, keeping the front edge forward, and place upsidedown.

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11. Remove 5V power cable and extract from robot

12. Disconnect 5V power at orange arrow (J13)

13. Discard old 5V power cable

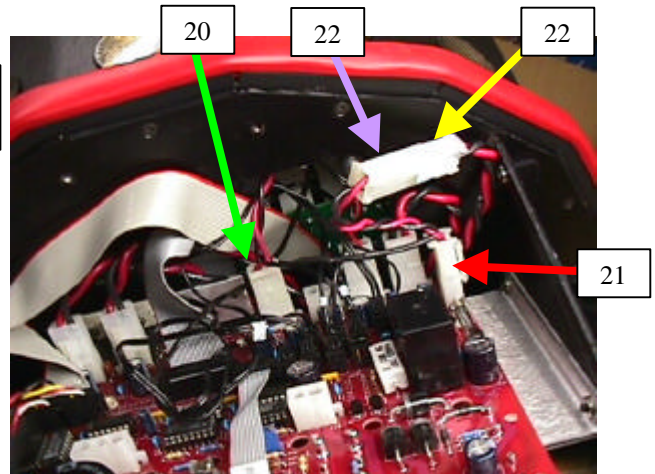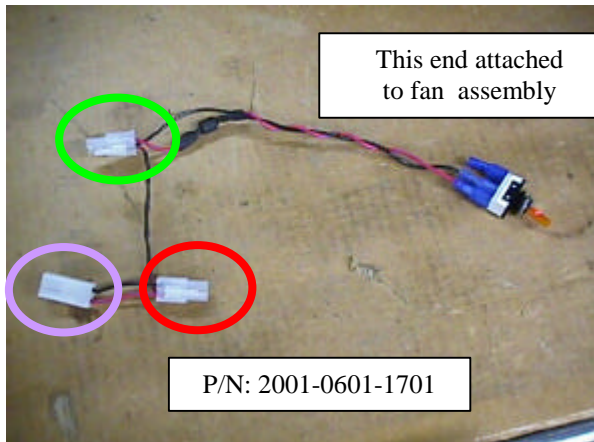13: Discard
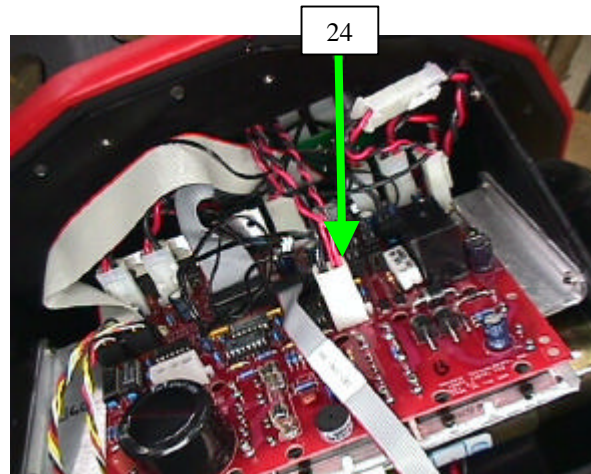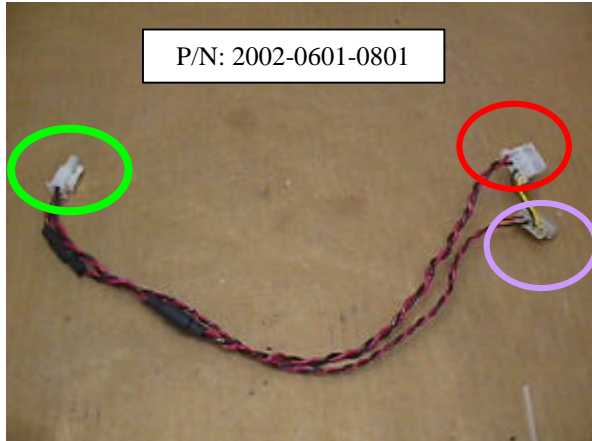
15: Discard

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14. Using 2mm hex wrench, Remove 6 screws (M3 Button) and 6 nuts w/ lock-washers to free the 3 DB-connectors

15. Discard flat sheetmetal shown above

16. Using 2mm hex wrench, Install the 3 DB-connectors in P/N 2002-0501-0301

17. Remove Diode plug at blue arrow (J4). Discard

18. Diconnect battery cable at yellow arrow (J1)

19. Plug in fan connector to red board (J8)

This end attached to fan assembly

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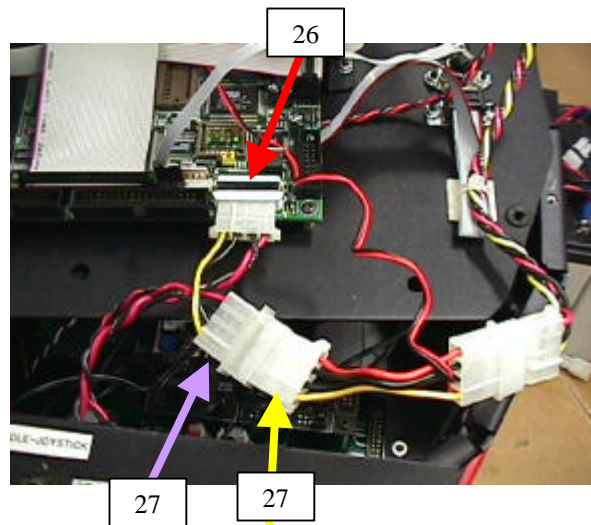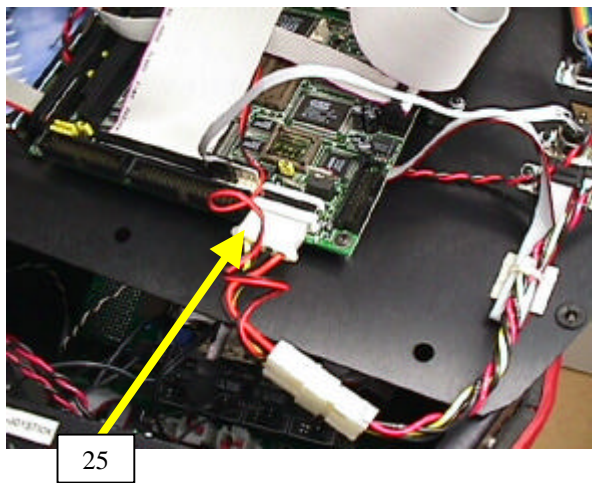

20. Install green plug of cable at green arrow (J4)

21. Install red plug into board at red arrow (J1)

22. Connect yellow battery cable from step 3, to remaining plug of new cable at purple arrow

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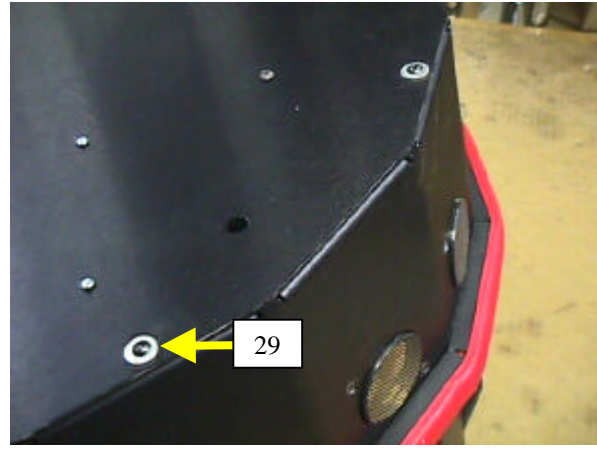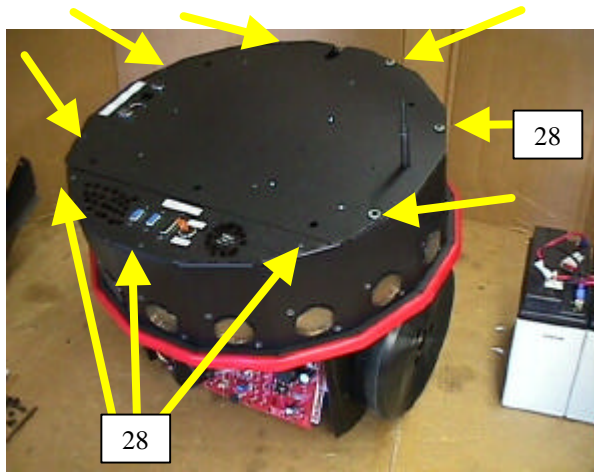23. Thread green plug of new power cable from top of Scout to lower front

24. Plug in green plug of new power cable (J13)
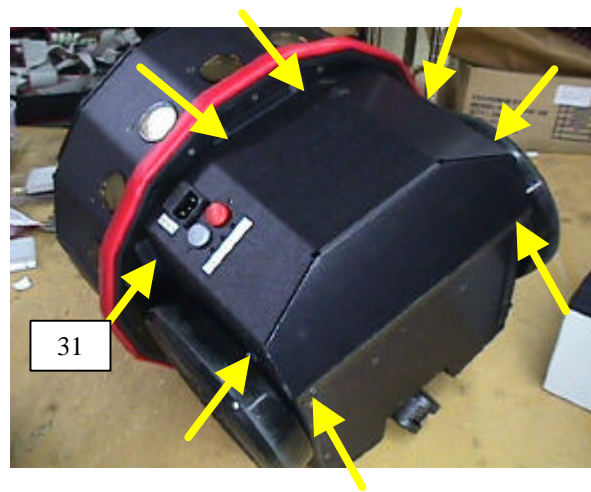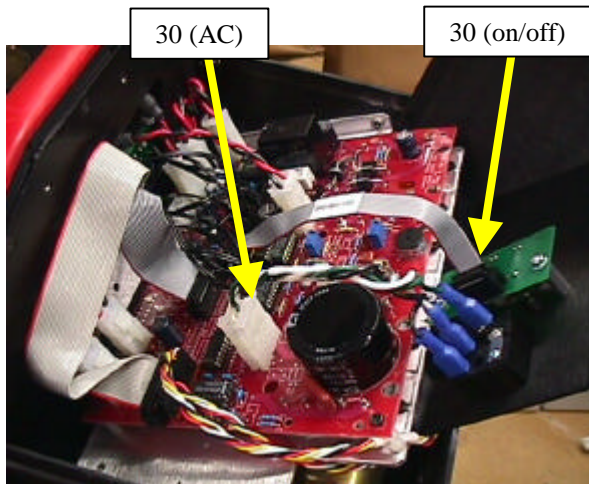
25. Unplug 4 pin power to PC

26. Plug red end of new power cable into PC

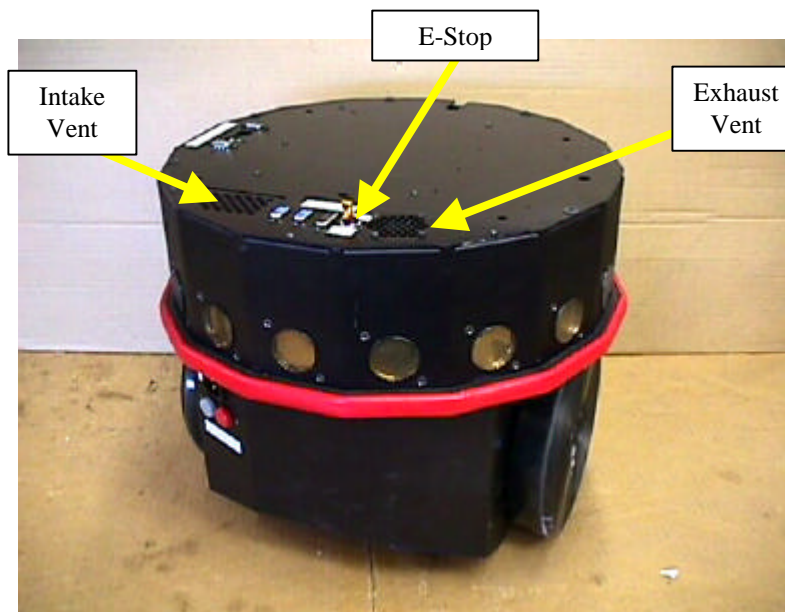27. Plug purple end of new power cable into connector removed from PC in step 21

28. Using 2mm hex wrench, Install 3 screws (M3 Button)

29. Rotate top and install 6 washers and screws (M3 Button). Only tighten until snug -- Do Not crush grommets

30 (AC)   30 (on/off)   31

30. Connect front of Scout to 3 wire AC cable and 10 wire ON/OFF cable where shown.

31. Use 2.5mm hex wrench to install 8 screws (M4 CSK) in front of Scout.

E-Stop

Intake Vent

Exhaust Vent

32. Put Scout on its wheels.

33. Install batteries.

34. Close and Latch rear door.

35. Orange E-stop switch controls power to the motors only. 'STOP' disconnects the only the motors.

36. Be careful not to cover vent holes.

37. Continue research… ☺